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Standard Single Data Table Web Management Information System Through ASP

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Abstract

The new trend in computer application is to use browser as the interface and networking database. MicroSoft designed 6 objects to add on to the HyperText Markup Language (HTML) to link homepage with database. It makes web MIS easy and the result calls Active Server Pages (ASP). The purpose of this paper is to introduce a standard procedure to develop a single data table web MIS. It uses a class student roll as an example to illustrate the procedure.

1. Introduction

Information system must be networked or its accessibility will limit its usefulness. Ever since the browser was introduced, almost all computer users use browser as the interface in accessing information from remote computers. Browser was designed to read the web pages through HyperText Markup Language. Therefore linking the database with HTML becomes necessary. MicroSoft designed six objects (server, response, request, application, session, cookie) and web server can execute them to accomplish this. Server object is used to open database and data table. Response object is used to bring information from server to users through browser. Request object is used to send information from user's browser to server. Application object manages the web operations. Session object manages individual web user. Cookie object writes temporary information at user's computer. With these 6 objects plus SQL and VB, all the database management operations can be performed in web pages.

2. System Components

All management information system must be menu-driven and user-friendly. In additions, all management information system must be able to (1) add new record to file, (2) edit existing record in file, (3) delete existing record in file, and (4) generate reports. Web MIS must be the same way. Therefore a single data table web management information system must have the following components:

1. A Mainmenu.html page for user to choose Add, Edit, Delete, and Report options.
2. In a add module, a Add.html form for user to type in new record and a Add.asp ASP to perform the actual adding of new record to file.
3. In the delete module, a KeyenterE.html form is used to ask user whose record the user wish to edit and a LooktatE.asp ASP to retrieve the correct record and put it on the screen for the user to see and to edit. In addition a Modify.asp ASP is used to actually perform the modification or replacement of old record by new record.
4. In the delete module, a KeyenterD.html form is used to ask user whose record the user wish to delete and a LooktatD.asp ASP is used to retrieve the correct record and to put the retrieved record on the screen for the user to see. In addition a Delete.Asp ASP is used to actually perform the deletion of record.
5. A Report.asp ASP is used to bring out the report. If there is more than one report, a reportmenu.html page should be added between the main menu and reports.

3. The Single Table Web MIS Structure

The about components should be structured or configured as the following figure:

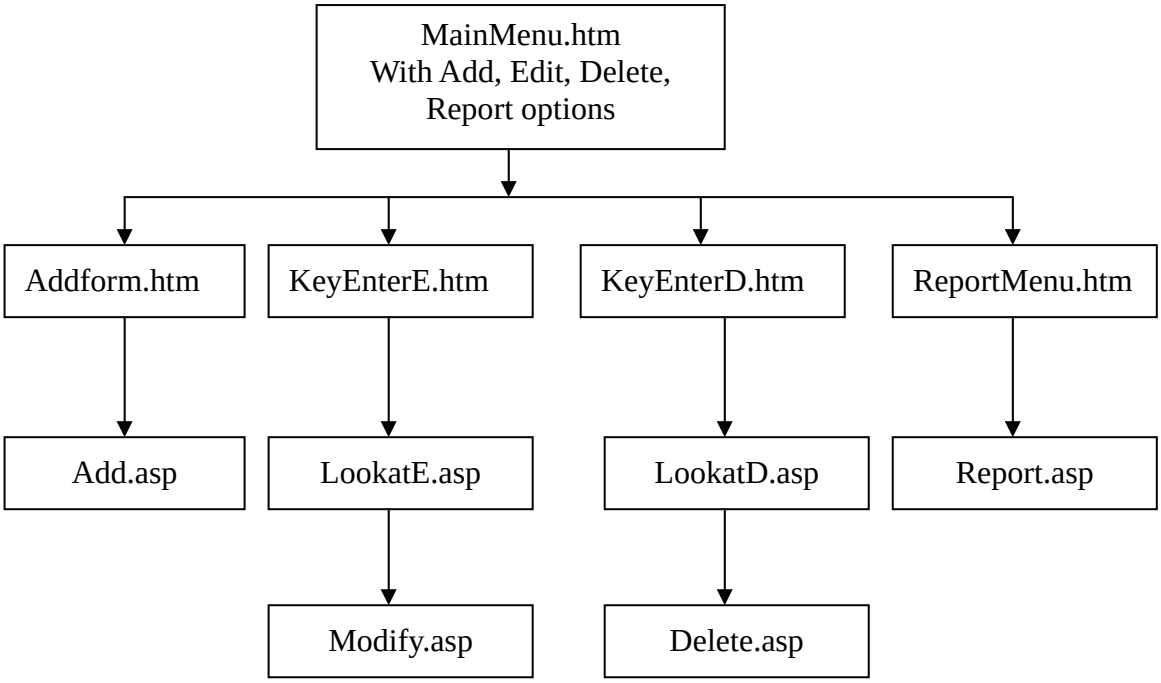


Figure 1: Single Table Web MIS Structure

To develop a single table web MIS, all that was needed is to develop a data table and write the above 5 html pages and 6 asp pages and link them based on the above figure.

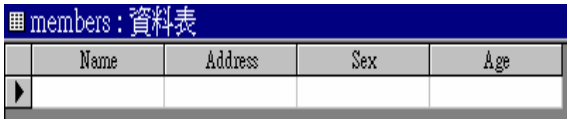
4. An Example

Let's use a classmate roll book as an example.

Step I: Develop an Access database and table with appropriate fields:

Database=members.mdb

Table=members



Step II: Write the needed 5 html pages and 6 asp pages.

1. Mainmenu.htm

```
<html><head><title>Mainmenu.htm</Title></head
>
<body>
<Body bgcolor=#00ff00>
<Center><H1>Maninenu for Single File
System</H1><br>
<p><p><p><p>
<h2> <table border=2>
<tr><td><a href="add.htm">ADD</a></td>
<td><a href="keyentere.htm">Modify</a></td>
<td><a href="keyenterd.htm">Delete</a></td>
<td><a href="reportmenu.htm">Reports</a></td>
</table>
<p><p>Please Make a Selection</h2>
<p><p><p><p>
</font></center>
</body></html>
```

2. Add.htm

```
<html><head><title>Add.htm</title></head>
<body>
 <body bgcolor=#00ff00>
 <form method=get action="add.asp">
 <H2><b>Add New Members To File</b></H2>
<p>
   Name <input type=Text name ="Name1"><br>
   Address <input type=Text name ="Add1"><br>
   Sex(1 for Male, 2 for Female)<input type=Text
size=1 name ="Sex1"><br>
   age<input type=Text size=2 name ="Age1"><p>
 <hr>
 <input type="submit" value="Add Above Record
to File">
 </form>
 <hr><p>
 <a href="mainmenu.htm"> Go Back to Mainmenu
</a>
 <p><hr>
</body></html>
```

3. Add.asp

```
<html><head><title>Add.asp</title></head>
<body>
```

```
 <body bgcolor=#00ff00>
 <%
  if Request("Name1") <> "" then
  Set
Conn=Server.CreateObject("ADODB.Connection")
  Conn.Open "driver={microsoft access driver
(*.mdb)}; dbq=" & _
        server.mappath("members.mdb")
  set rs=conn.execute("members")
  SQL = "INSERT INTO Members(Name, Address,
Sex, Age) VALUES('" & _
   Request("Name1") & "','" & Request("Add1")
& "','" & _
   Request("Sex1") & "','" & Request("Age1") &
"')"
    Set RS= Conn.Execute(SQL)
  End if
%>
<center><h2>Record has been added to data file
<br><p><p><p>
 <a href="mainmenu.htm"> Go Back to Mainmenu
</a>
<br><p><p><p>
 <a href="add.htm"> Go Back to add form </a>
 <p></h2></center>
</body>
</html>
```

4. KeyenterE.htm

```
<html><head><title>KeyEnterE.htm</Title></head
>
<body>
<Body bgcolor=#00ff00>
<Center><H1>Enter the Name of the Member <p>
            Whose Record You Wish to
EDIT</H1>
<p><p><p><p>
<h2> <form action="lookate.asp" method="get">
Name:<input Type=Text Name="Search1"><p><p>
<input type=submit value="Search">
</form> </h2></center>
</body></html>
```

5. LookatE.asp

```
<html><head><title>LookatE.asp</title></head>
<body>
 <body bgcolor=#00ff00>
 <%
  if Request.QueryString("search1") <> "" then
  Set
Conn=Server.CreateObject("ADODB.Connection")
  Conn.Open "driver={microsoft access driver
(*.mdb)}; dbq=" & _
        server.mappath("members.mdb")
  set rs=conn.execute("members")
     SQL = "Select * from members WHERE
name='" & request("search1") & "'"
     Set RS= Conn.Execute(SQL)
  End if
%>
 <form method=get action="modify.asp">
 <H2><b>Edit Member's Record in File</b></H2>
<p>
  Name <input type=Text name ="Name1"
value="<% =rs.fields(0).value %>"><br>
  Address <input type=Text name ="Add1"
value="<% =rs.fields(1).value %>"><br>
  Sex(1 for Male, 2 for Female)<input type=Text
size=1 name ="Sex1" value="<%
=rs.fields(2).value %>"><br>
  age<input type=Text size=2 name ="Age1"
value="<% =rs.fields(3).value %>"><p>
 <hr>
 <input type="submit" value="Modify Above
Record in File">
 </form>
 <hr><p>
 <a href="mainmenu.htm"> Go Back to Mainmenu
</a>
 <p><hr>
</body><html>
```

6. Modify.asp

```
<html><head><title>Modify.asp</title></head>
<body>
 <body bgcolor=#00ff00>
 <%
  Set
Conn=Server.CreateObject("ADODB.Connection")
  Conn.Open "driver={microsoft access driver
(*.mdb)}; dbq=" & _
        server.mappath("members.mdb")
  set rs=conn.execute("members")
     SQL = "UPDATE members SET name='" &
request("Name1") & "', address='" &
request("add1") & "', Sex='" & request("sex1") & "',
age='" & request("age1") & "' WHERE Name='" &
Request("name1") & "'"
     Set RS= Conn.Execute(SQL)
%>
 <P><p><p><p>
 <H2><b>I Have made the change on the Record
in the File</b></H2> <p>
 <hr>
 <hr><p>
 <a href="mainmenu.htm"> Go Back to Mainmenu
</a>
 <p><hr>
</body>
<html>
```

7. KeyenterD.htm

```
<html><head><title>KeyEnterD.asp</Title></head
>
<body>
<Body bgcolor=#00ff00>
```

```
<Center><H1>Enter the Name of the Member <p>
                Whose Record You Wish to
DELETE</H1>
<p><p><p><p>
<h2> <form action="lookatd.asp" method="get">
Name:<input Type=Text Name="Search1"><p><p>
<input type=submit value="Search">
</form> </h2></center>
</body></html>
```

8. LookatD.asp

```
<html><head><title>LookatD.asp</title></head>
<body>
  <body bgcolor=#00ff00>
  <%
    if Request.QueryString("search1") <> "" then
    Set
Conn=Server.CreateObject("ADODB.Connection")
    Conn.Open "driver={microsoft access driver
(*.mdb)}; dbq=" & _
          server.mappath("members.mdb")
    set rs=conn.execute("members")
       SQL = "Select * from members WHERE
name='" & request("search1") & "'"
       Set RS= Conn.Execute(SQL)
    End if
%>
  <form method=get action="delete.asp">
  <H2><b>Delete Member's Record in
File</b></H2> <p>
    Name <input type=Text name ="Name1"
value="<% =rs.fields(0).value %>"><br>
    Address <input type=Text name ="Add1"
value="<% =rs.fields(1).value %>"><br>
    Sex(1 for Male, 2 for Female)<input type=Text
size=1 name ="Sex1" value="<%
=rs.fields(2).value %>"><br>
    age<input type=Text size=2 name ="Age1"
value="<% =rs.fields(3).value %>"><p>
    <hr>
  <input type="submit" value="Delete Above
Record in File">
  </form>
  <hr><p>
  <a href="mainmenu.htm"> Go Back to Mainmenu
</a>
  <p><hr>
</body><html>
```

9. Delete.asp

```
<html><head><title>Delete.asp</title></head>
<body>
  <body bgcolor=#00ff00>
  <%
    Set
Conn=Server.CreateObject("ADODB.Connection")
    Conn.Open "driver={microsoft access driver
(*.mdb)}; dbq=" & _
          server.mappath("members.mdb")
    set rs=conn.execute("members")
       SQL = "Delete from members WHERE
Name='" & Request("name1") & "'"
       Set RS= Conn.Execute(SQL)
  %>
  <P><p><p><p>
  <H2><b>I Have Deleted the Record in the
File</b></H2> <p>
  <hr>
  <hr><p>
  <a href="mainmenu.htm"> Go Back to Mainmenu
</a>
  <p><hr>
</body><html>
```

10. Reportmenu.htm

```
<html><head><title>ReportKey.htm</Title></head
>
<body>
<Body bgcolor=#00ff00>
<Center><H1>Select the Type of Reports <p>
    (Based on Sex)</H1>
<p><p><p><p>
<h2> <form action="report.asp" method="get">
<input Type=radio Name="sex1"
value=1>Male<p>
<input Type=radio Name="sex1"
value=2>Female<p>
<input Type=radio Name="sex1" value=3>All<p>
<input type=submit value="Preview">
</form> </h2></center>
</body></html>
```

11. Report.asp

```
<html><head><title>ReportKey.htm</Title></head
>
<body>
<Body bgcolor=#00ff00>
<Center><H1>Select the Type of Reports <p>
    (Based on Sex)</H1>
<p><p><p><p>
<h2> <form action="report.asp" method="get">
<input Type=radio Name="sex1"
value=1>Male<p>
<input Type=radio Name="sex1"
value=2>Female<p>
<input Type=radio Name="sex1" value=3>All<p>
<input type=submit value="Preview">
</form> </h2></center>
</body></html>
```

5. Conclusion

The about web pages programs are standard format for all single table MIS. In application, all that was needed is to change the database name, field names to make it fit.

References

[1] Matt J. Crouch, *ASP.NET and VB.NET Web Programming*, Addison Wesley Professional, 1st edition (May, 2002)

[2] Stephen Walther and Steve Banick, *Active Server Pages 2.0 Unleashed*, Sams, 1st edition (July 1999)